BEST AVAILABLE COPY

FIG. 1

BEST AVAILABLE COPY

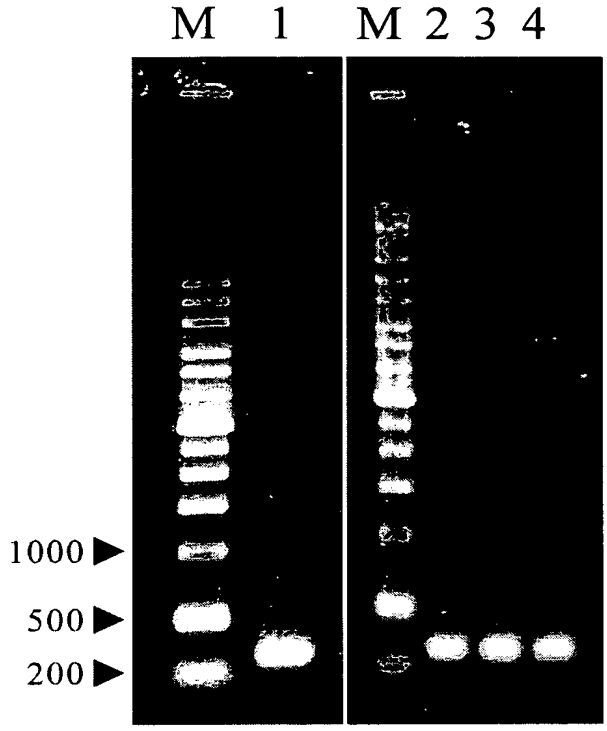


FIG. 2

```
                    1                                                    60
CCRC12913     (1) ------------------------------------------------------------
CCRC14001     (1) ------------------------------------------------------------
  GM-080      (1) ------------------------------------------------------------
CCRC16100     (1) ------------------------------------------------------------
    KLB58     (1) ----------------AACGCTG-CAGCGTGCCTA-TACATGCCAGTCGAACGAGTTCTC
     PB4      (1) ATCCTGGCTCAGGATGAACGCTGGCGGCGTGCCTAATACATGCAAGTCGAACGAGTTCTC
     F31      (1) ----------------AACGCTGGCGGCGTGCCTAATACATGCAAGTCGAACGAGTTCTC
Consensus     (1)

                   61                                                   120
CCRC12913     (1) ------------------------------------------------------------
CCRC14001     (1) ----------------------------------------------------GGTGAGTAC
  GM-080      (1) -----------------------------------------------------GTGAGTAC
CCRC16100     (1) ----------------------------------------------GCGAGGGTGAGTAC
    KLB58    (43) GTTGATGATCGGTGCTTGCACCGAGATTCAACATGGAACGAGTGGCGGACGGGTGAGTAA
     PB4     (61) GTTGATGATCGGTGCTTGCACCGAGATTCAACATGGAACGAGTGGCGGACGGGTGAGTAA
     F31     (45) GTTGATGATCGGTGCTTGCACCGAGATTCAACATGGAACGAGTGGCGGACGGGTGAGTAA
Consensus    (61)                                              G   GGGTGAGTA

                  121                                                   180
CCRC12913     (1) ----TGGGTA-CCTGCCCTTAAGTGGGGGATAACATTTGGAAACAGATGCTAATACCGCA
CCRC14001    (10) C--GTGGGTA-CCTGCCCTTAAGTGGGGGATAACATTTGGAAACAGATGCTAATACCGCA
  GM-080      (9) C--GTGGGTA-CCTGCCCTTA-GTGGGGGATAACATTTGGAAACAGATGCTAATACCGCA
CCRC16100    (15) C--GTGGGTA-CCTGCCCTTAAGTGGGGGATAACATTTGGAAACAGATGCTAATACCGCA
    KLB58   (103) CACGTGGGTAACCTGCCCTTAAGTGGGGGATAACATTTGGAAACAGATGCTAATACCGCA
     PB4    (121) CACGTGGGTAACCTGCCCTTAAGTGGGGGATAACATTTGGAAACAGATGCTAATACCGCA
     F31    (105) CACGTGGGTAACCTGCCCTTAAGTGGGGGATAACATTTGGAAACAGATGCTAATACCGCA
Consensus   (121) C  GTGGGTA CCTGCCCTTAAGTGGGGGATAACATTTGGAAACAGATGCTAATACCGCA

                  181                                                   240
CCRC12913    (56) TAGATCCAAGAACCGCATGGTTCTTGGCTGAAAGATGGCGTAAGCTATCGCTTTTGGATG
CCRC14001    (67) TAGATCCAAGAACCGCATGGTTCTTGGCTGAAAGATGGCGTAAGCTATCGCTTTTGGATG
  GM-080     (65) TAGATCCAAGAACCGCATGGTTCTTGGCTGAAAGATGGCGTAAGCTATCGCTTTTGGATG
CCRC16100    (72) TAGATCCAAGAACCGCATGGTTCTTGGCTGAAAGATGGCGTAAGCTATCGCTTTTGGATG
    KLB58   (163) TAGATCCAAGAACCGCATGGTTCTTGGCTGAAAGATGGCGTAAGCTATCGCTTTTGGATG
     PB4    (181) TAGATCCAAGAACCGCATGGTTCTTGGCTGAAAGATGGCGTAAGCTATCGCTTTTGGATG
     F31    (165) TAGATCCAAGAACCGCATGGTTCTTGGCTGAAAGATGGCGTAAGCTATCGCTTTTGGATG
Consensus   (181) TAGATCCAAGAACCGCATGGTTCTTGGCTGAAAGATGGCGTAAGCTATCGCTTTTGGATG

                  241                                                   300
CCRC12913   (116) GACCCGCGGCGTATTAGCTAGTTGGTGAGGTAATGGCTCACCAAGGCGATGATACGTAGC
CCRC14001   (127) GACCCGCGGCGTATTAGCTAGTTGGTGAGGTAATGGCTCACCAAGGCGATGATACGTAGC
  GM-080    (125) GACCCGCGGCGTATTAGCTAGTTGGTGAGGTAATGGCTCACCAAGGCGATGATACGTAGC
CCRC16100   (132) GACCCGCGGCGTATTAGCTAGTTGGTGAGGTAATGGCTCACCAAGGCGATGATACGTAGC
    KLB58   (223) GACCCGCGGCGTATTAGCTAGTTGGTGAGGTAATGGCTCACCAAGGCGATGATACGTAGC
     PB4    (241) GACCCGCGGCGTATTAGCTAGTTGGTGAGGTAATGGCTCACCAAGGCGATGATACGTAGC
     F31    (225) GACCCGCGGCGTATTAGCTAGTTGGTGAGGTAATGGCTCACCAAGGCGATGATACGTAGC
Consensus   (241) GACCCGCGGCGTATTAGCTAGTTGGTGAGGTAATGGCTCACCAAGGCGATGATACGTAGC

                  301                                                   360
CCRC12913   (176) CGAACTGAGAGGTTGATCGGCCACATTGGGACTGAGACACGGCCCAAACTCCTACGGGAG
CCRC14001   (187) CGAACTGAGAGGTTGATCGGCCACATTGGGACTGAGACACGGCCCAAACTCCTACGGGAG
  GM-080    (185) CGAACTGAGAGGTTGATCGGCCACATTGGGACTGAGACACGGCCCAAACTCCTACGGN--
CCRC16100   (192) CGAACTGAGAGGTTGATCGGCCACATTGGGACTGAGACACGGCCCAAACTCCTACGGG--
    KLB58   (283) CGAACTGAGAGGTTGATCGGCCACATTGGGACTGAGACACGGCCCAAACTCCTACGGG--
     PB4    (301) CGAACTGAGAGGTTGATCGGCCACATTGGGACTGAGACACGGCCCAAACTCCTACGGG--
     F31    (285) CGAACTGAGAGGTTGATCGGCCACATTGGGACTGAGACACGGCCCAAACTCCTACGGG--
Consensus   (301) CGAACTGAGAGGTTGATCGGCCACATTGGGACTGAGACACGGCCCAAACTCCTACGGG
```

FIG. 3

```
                    361                                                 420
CCRC12913   (236) GGCCAGCAGT-GGGAG----------------------------------------
CCRC14001   (247) GGGCAGCAGT-GGGAG----------------------------------------
  GM-080    (243) GGGCAGCAGT-GGGA-----------------------------------------
CCRC16100   (250) AGGCAGCAGT-GGGA-----------------------------------------
   KLB58    (341) AGGCAGCAGTAGGGAATCTTCCACAATGGACGCAAGTCTGATGGAGCAACGCCGCGTGAG
     PB4    (359) AGGCAGCAGTAGGGAATCTTCCACAATGGACGCAAGTCTGATGGAGCAACGCCGCGTGAG
     F31    (343) AGGCAGCAGTAGGGAATCTTCCACAATGGACGCAAGTCTGATGGAGCAACGCCGCGTGAG
Consensus   (361) AGGCAGCAGT GGGA

                    421                                                 480
CCRC12913   (251) ----------------------------------------------------------
CCRC14001   (262) ----------------------------------------------------------
  GM-080    (257) ----------------------------------------------------------
CCRC16100   (264) ----------------------------------------------------------
   KLB58    (401) TGAAGAAGGCTTTCGGGTCGTAAAACTCTGTTGTTGGAGAAGAATGGTCGGCAGAGTAAC
     PB4    (419) TGAAGAAGGCTTTCGGGTCGTAAAACTCTGTTGTTGGAGAAGAATGGTCGGCAGAGTAAC
     F31    (403) TGAAGAAGGCTTTCGGGTCGTAAAACTCTGTTGTTGGAGAAGAATGGTCGGCAGAGTAAC
Consensus   (421)

                    481                                                 540
CCRC12913   (251) ----------------------------------------------------------
CCRC14001   (262) ----------------------------------------------------------
  GM-080    (257) ----------------------------------------------------------
CCRC16100   (264) ----------------------------------------------------------
   KLB58    (461) TGTTGTCGGCGTGACGGTATCCAACCAGAAAGCCACGGCTAACTACGTGCCAGCAGCCGC
     PB4    (479) TGTTGTCGGCGTGACGGTATCCAACCAGAAAGCCACGGCTAACTACGTGCCAGCAGCCGC
     F31    (463) TGTTGTCGGCGTGACGGTATCCAACCAGAAAGCCACGGCTAACTACGTGCCAGCAGCCGC
Consensus   (481)

                    541                                                 600
CCRC12913   (251) ----------------------------------------------------------
CCRC14001   (262) ----------------------------------------------------------
  GM-080    (257) ----------------------------------------------------------
CCRC16100   (264) ----------------------------------------------------------
   KLB58    (521) GGTAATACGTAGGTGGCAAGCGTTATCCGGATTTATTGGGCGTAAAGCGAGCGCAGGCGG
     PB4    (539) ----------------------------------------------------------
     F31    (523) GGTAATACGTAGGTGGCAAGCGTTATCCGGATTTATTGGGCGTAAAGCGAGCGCAGGCGG
Consensus   (541)

                    601                                                 660
CCRC12913   (251) ----------------------------------------------------------
CCRC14001   (262) ----------------------------------------------------------
  GM-080    (257) ----------------------------------------------------------
CCRC16100   (264) ----------------------------------------------------------
   KLB58    (581) TTTTTTAAGTCTGATGTGAAAGCCCTCGGCTTAACCGAAGAAGCGCATCGGAAACTGGGA
     PB4    (539) ----------------------------------------------------------
     F31    (583) TTTTTTAAGTCTGATGTGAAAGCCCTCGGCTTAACCGAGGAAGCGCATCGGAAACTGGGA
Consensus   (601)

                    661                                                 720
CCRC12913   (251) ----------------------------------------------------------
CCRC14001   (262) ----------------------------------------------------------
  GM-080    (257) ----------------------------------------------------------
CCRC16100   (264) ----------------------------------------------------------
   KLB58    (641) AACTTGAGTGCAGAAGAGGACAGTGGAACTCCATGTGTAGCGGTGAAATGCGTAGATATA
     PB4    (539) ----------------------------------------------------------
     F31    (643) AACTTGAGTGCAGAAGAGGACAGTGGAACTCCATGTGTAGCGGTGAAATGCGTAGATATA
Consensus   (661)
```

FIG. 3 (continued)

```
                    721                                                 780
CCRC12913   (251) ------------------------------------------------------------
CCRC14001   (262) ------------------------------------------------------------
   GM-080   (257) ------------------------------------------------------------
CCRC16100   (264) ------------------------------------------------------------
     KLB58  (701) TGGAAGAACACCAGTGGCGAAGGCGGCTGTCTGGTCTGTAACTGACGCTGAGGCTCGAAA
      PB4   (539) ------------------------------------------------------------
       F31  (703) TGGAAGAACACCAGTGGCGAAGGCGGCTGTCTGGTCTGTAACTGACGCTGAGGCTCGAAA
Consensus   (721)

                    781                                                 840
CCRC12913   (251) ------------------------------------------------------------
CCRC14001   (262) ------------------------------------------------------------
   GM-080   (257) ------------------------------------------------------------
CCRC16100   (264) ------------------------------------------------------------
     KLB58  (761) GCATGGGTAGCGAACAGGATTAGATACCCTGGTAGTCCATGCCGTAAACGATGAATGCTA
      PB4   (539) ------------------------------------------------------------
       F31  (763) GCATGGGTAGCGAACAGGATTAGATACCCTGGTAGTCCATGCCGTAAACGATGAATGCTA
Consensus   (781)

                    841                                                 900
CCRC12913   (251) ------------------------------------------------------------
CCRC14001   (262) ------------------------------------------------------------
   GM-080   (257) ------------------------------------------------------------
CCRC16100   (264) ------------------------------------------------------------
     KLB58  (821) GGTGTTGGAGGGTTTCCGCCCTTCAGTGCCGCAGCTAACGCATTAAGCATTCCGCCTGGG
      PB4   (539) ------------------------------------------------------------
       F31  (823) GGTGTTGGAGGGTTTCCGCCCTTCAGTGCCGCAGCTAACGCATTAAGCATTCCGCCTGGG
Consensus   (841)

                    901                                                 960
CCRC12913   (251) ------------------------------------------------------------
CCRC14001   (262) ------------------------------------------------------------
   GM-080   (257) ------------------------------------------------------------
CCRC16100   (264) ------------------------------------------------------------
     KLB58  (881) GAGTACGACCGCAAGGTTGAAACTCAAAGGAATTGACGGGGGCCCGCACAAGCGGTGGAG
      PB4   (539) ------------------------------------------------------------
       F31  (883) GAGTACGACCGCAAGGTTGAAACTCAAAGGAATTGACGGGGGCCCGCACAAGCGGTGGAG
Consensus   (901)

                    961                                                1020
CCRC12913   (251) ------------------------------------------------------------
CCRC14001   (262) ------------------------------------------------------------
   GM-080   (257) ------------------------------------------------------------
CCRC16100   (264) ------------------------------------------------------------
     KLB58  (941) CATGTGGTTTAATTCGAAGCAACGCGAAGAACCTTACCAAGTCTTGACATCTTTTGATCA
      PB4   (539) ------------------------------------------------------------
       F31  (943) CATGTGGTTTAATTCGAAGCAACGCGAAGAACCTTACCAAGTCTTGACATCTTTTGATCA
Consensus   (961)

                   1021                                                1080
CCRC12913   (251) ------------------------------------------------------------
CCRC14001   (262) ------------------------------------------------------------
   GM-080   (257) ------------------------------------------------------------
CCRC16100   (264) ------------------------------------------------------------
     KLB58 (1001) CCTGAGAGATCAGGTTTCCCCTTCGGGGGCAAAATGACAGGTGGTGCATGGTTGTCGTCA
      PB4   (539) ------------------------------------------------------------
       F31 (1003) CCTGAGAGATCAGGTTTCCCCTTCGGGGGCAAAATGACAGGTGGTGCATGGTTGTCGTCA
Consensus  (1021)
```

FIG. 3 (continued)

```
                    1081                                                1140
CCRC12913   (251) ------------------------------------------------------------
CCRC14001   (262) ------------------------------------------------------------
   GM-080   (257) ------------------------------------------------------------
CCRC16100   (264) ------------------------------------------------------------
    KLB58  (1061) GCTCGTGTCGTGAGATGTTGGGTTAAGTCCCGCAACGAGCGCAACCCTTATGACTAGTTG
      PB4   (539) ------------------------------------------------------------
      F31  (1063) GCTCGTGTCGTGAGATGTTGGGTTAAGTCCCGCAACGAGCGCAACCCTTATGACTAGTTG
Consensus  (1081)

                    1141                                                1200
CCRC12913   (251) ------------------------------------------------------------
CCRC14001   (262) ------------------------------------------------------------
   GM-080   (257) ------------------------------------------------------------
CCRC16100   (264) ------------------------------------------------------------
    KLB58  (1121) CCAGCATTTAGTTGGGCACTCTAGTAAGACTGCCGGTGACAAACCGGAGGAAGGTGGGGA
      PB4   (539) ------------------------------------------------------------
      F31  (1123) CCAGCATTTAGTTGGGCACTCTAGTAAGACTGCCGGTGACAAACCGGAGGAAGGTGGGGA
Consensus  (1141)

                    1201                                                1260
CCRC12913   (251) ------------------------------------------------------------
CCRC14001   (262) ------------------------------------------------------------
   GM-080   (257) ------------------------------------------------------------
CCRC16100   (264) ------------------------------------------------------------
    KLB58  (1181) TGACGTCAAATCATCATGCCCCTTATGACCTGGGCTACACACGTGCTACAATGGATGGTA
      PB4   (539) ------------------------------------------------------------
      F31  (1183) TGACGTCAAATCATCATGCCCCTTATGACCTGGGCTACACACGTGCTACAATGGATGGTA
Consensus  (1201)

                    1261                                                1320
CCRC12913   (251) ------------------------------------------------------------
CCRC14001   (262) ------------------------------------------------------------
   GM-080   (257) ------------------------------------------------------------
CCRC16100   (264) ------------------------------------------------------------
    KLB58  (1241) CAACGAGTTGCGAGACCGCGAGGTCAAGCTAATCTCTTAAAGCCATTCTCAGTTCGGACT
      PB4   (539) ------------------------------------------------------------
      F31  (1243) CAACGAGTTGCGAGACCGCGAGGTCAAGCTAATCTCTTAAAGCCATTCTCAGTTCGGACT
Consensus  (1261)

                    1321                                                1380
CCRC12913   (251) ------------------------------------------------------------
CCRC14001   (262) ------------------------------------------------------------
   GM-080   (257) ------------------------------------------------------------
CCRC16100   (264) ------------------------------------------------------------
    KLB58  (1301) GTAGGCTGCAACTCGCCTACACGAAGTCGGAATCGCTAGTAATCGCGGATCAGCACGCCG
      PB4   (539) ------------------------------------------------------------
      F31  (1303) GTAGGCTGCAACTCGCCTACACGAAGTCGGAATCGCTAGTAATCGCGGATCAGCACGCCG
Consensus  (1321)

                    1381                                                1440
CCRC12913   (251) ------------------------------------------------------------
CCRC14001   (262) ------------------------------------------------------------
   GM-080   (257) ------------------------------------------------------------
CCRC16100   (264) ------------------------------------------------------------
    KLB58  (1361) CGGTGAATACGTTCCCGGGCCTTGTACACACCGCCCGTCACACCATGAGAGTTTGTAACA
      PB4   (539) ------------------------------------------------------------
      F31  (1363) CGGTGAATACGTTCCCGGGCCTTGTACACACCGCCCGTCACACCATGAGAGTTTGTAACA
Consensus  (1381)
```

FIG. 3 (continued)

```
                1441                                                                1500
CCRC12913   (251) ------------------------------------------------------------------------
CCRC14001   (262) ------------------------------------------------------------------------
   GM-080   (257) ------------------------------------------------------------------------
CCRC16100   (264) ------------------------------------------------------------------------
    KLB58  (1421) CCCGAAGCCGGTGGCGTAACCCTTTTAGGGAGCGAGCTGTCTAAGGTGGGACAAATGATT
      PB4   (539) ------------------------------------------------------------
      F31  (1423) CCCGAAGCCGGTGGCGTAACCCTTTTAGGGAGCGAGCTGTCTAAGGTGGGACAAATGATT
Consensus  (1441)

                1501                                1537
CCRC12913   (251) ------------------------------------
CCRC14001   (262) ------------------------------------
   GM-080   (257) ------------------------------------
CCRC16100   (264) ------------------------------------
    KLB58  (1481) AGGGTGAAGTCGTAACAAGGTAGCTAAAGGAGA----
      PB4   (539) ------------------------------------
      F31  (1483) AGGGTGAAGTCGTAACAAGG-AGCTGTAGGAGAACTA
Consensus  (1501)
```

FIG. 3 (continued)

FIG. 4

BEST AVAILABLE COPY

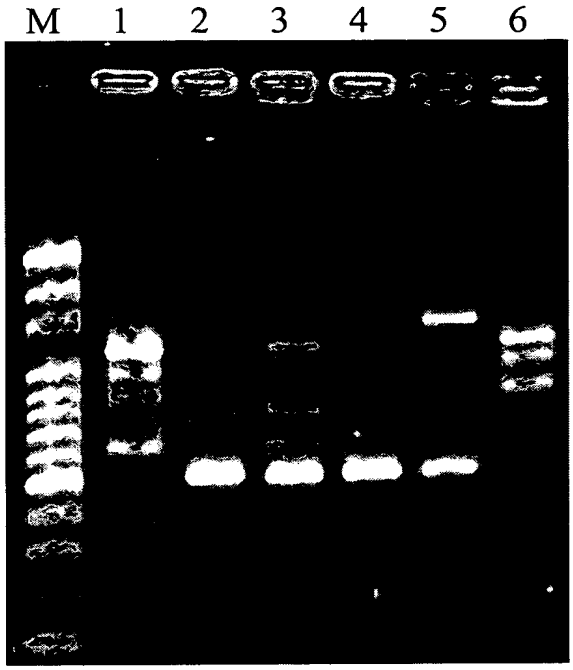


FIG. 5

BEST AVAILABLE COPY

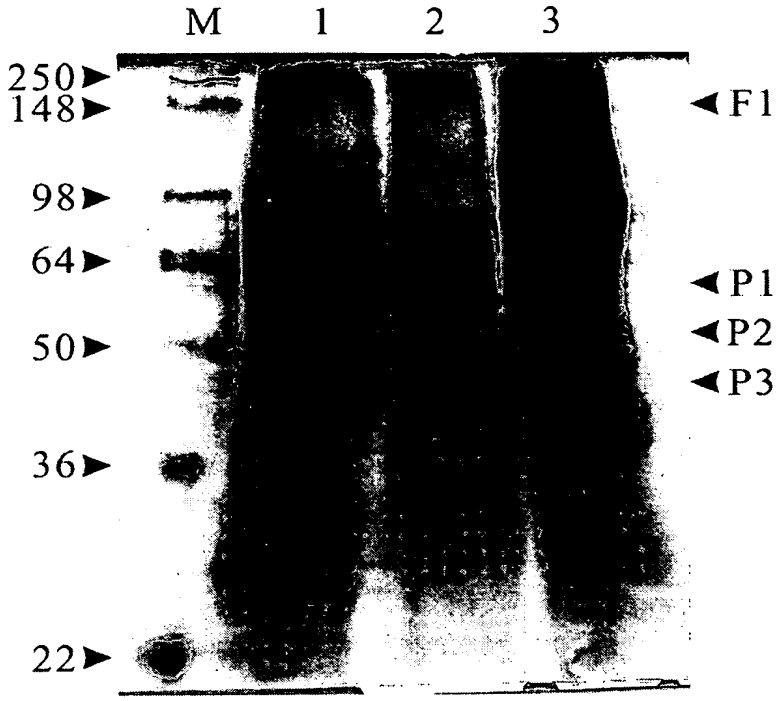


FIG. 6

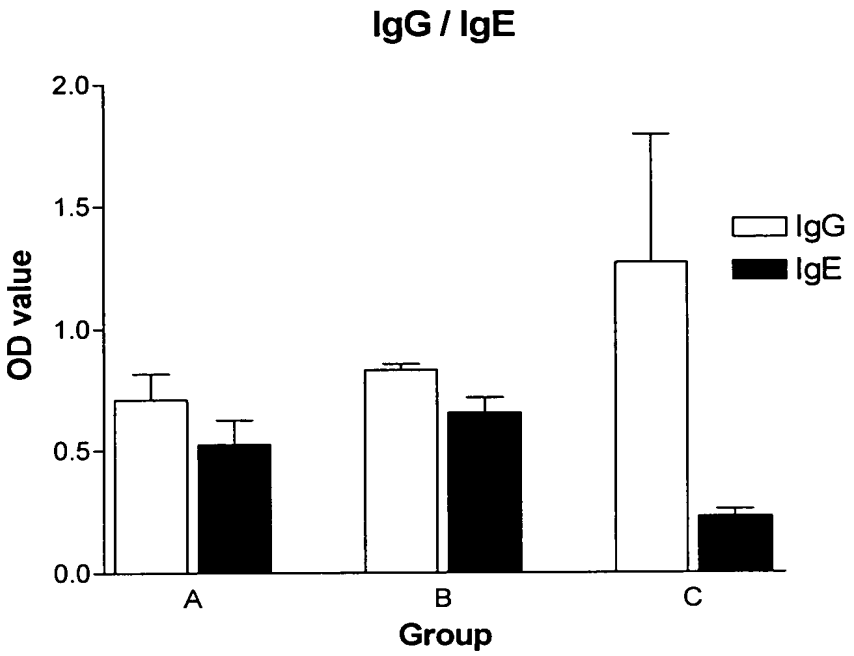


FIG. 7

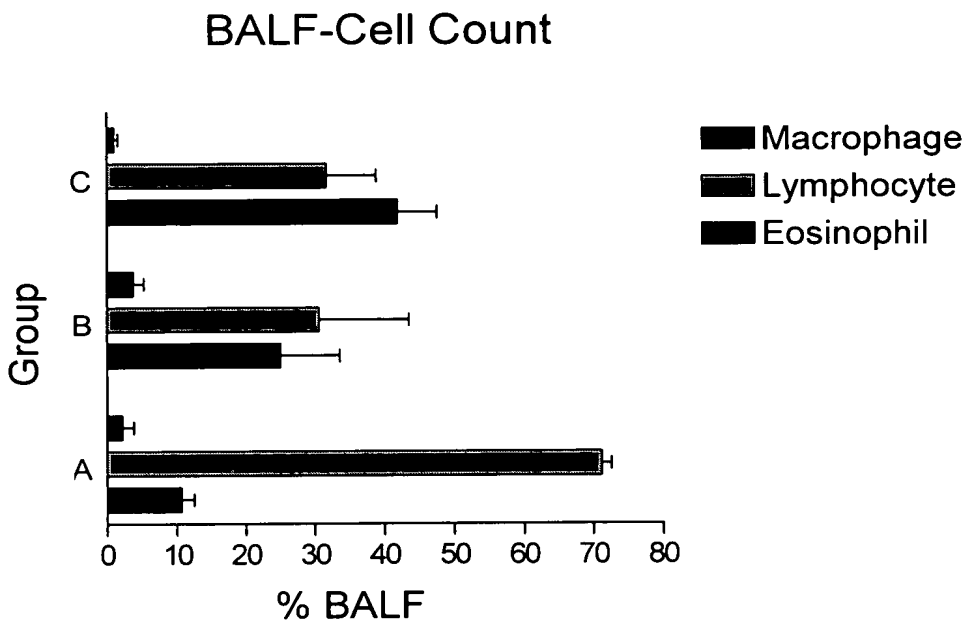
BALF-Cell Count
Macrophage
Lymphocyte
Eosinophil
Group
C
B
A
0
10
20
30
40
50
60
70
80
% BALF

FIG. 8

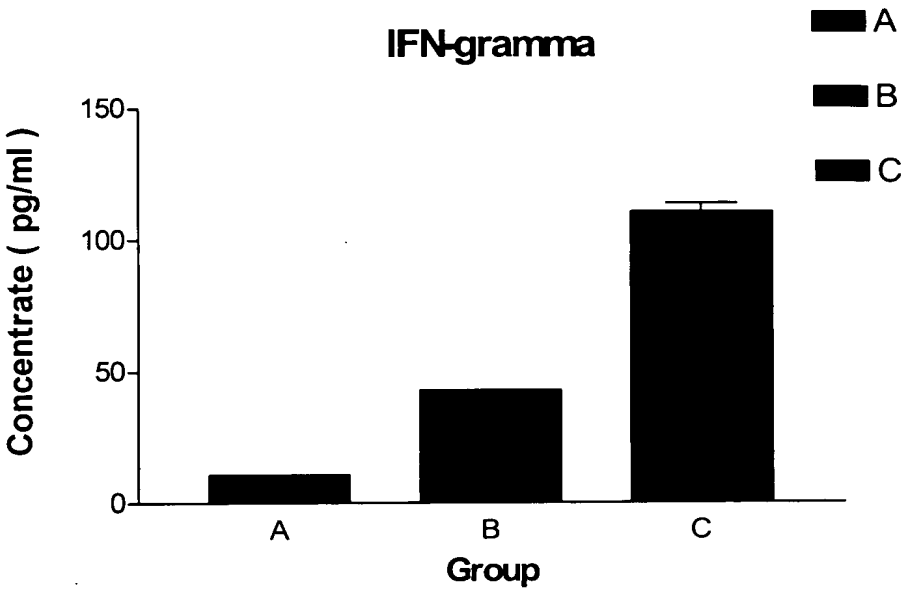


FIG. 9

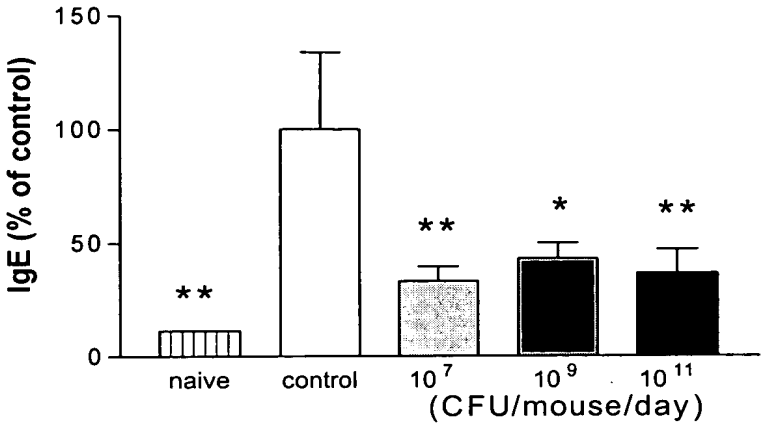
150
100
50
0
IgE (% of control)
**
**
*
**
naive
control
10 7
10 9
10 11
(CFU/mouse/day)

FIG. 10